

# Notice of Allowability

Application No.

10/511,747

Examiner

John J. Figueroa

Applicant(s)

COLLINS ET AL.

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## -- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to Amendment After-Final (9/14/07).
2. ☒ The allowed claim(s) is/are 44-48 and 52-62.
3. ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
  - a) ☒ All   b) ☐ Some\*   c) ☐ None   of the:
    1. ☐ Certified copies of the priority documents have been received.
    2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
    3. ☒ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

\* Certified copies not received: \_\_\_\_\_.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.

**THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.**

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
  5. ☐ CORRECTED DRAWINGS ( as "replacement sheets") must be submitted.
    - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review ( PTO-948) attached
      - 1) ☐ hereto or 2) ☐ to Paper No./Mail Date \_\_\_\_\_.
    - (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date \_\_\_\_\_.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

### Attachment(s)

- |  |  |
|--|--|
| 1. <input type="checkbox"/> Notice of References Cited (PTO-892)   | 5. <input type="checkbox"/> Notice of Informal Patent Application                                |
| 2. <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                       | 6. <input checked="" type="checkbox"/> Interview Summary (PTO-413),<br>Paper No./Mail Date _____ |
| 3. <input type="checkbox"/> Information Disclosure Statements (PTO/SB/08),<br>Paper No./Mail Date _____    | 7. <input checked="" type="checkbox"/> Examiner's Amendment/Comment                              |
| 4. <input type="checkbox"/> Examiner's Comment Regarding Requirement for Deposit<br>of Biological Material | 8. <input checked="" type="checkbox"/> Examiner's Statement of Reasons for Allowance             |
|  | 9. <input type="checkbox"/> Other _____  |

### EXAMINER'S AMENDMENT

1. An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it **MUST** be submitted no later than the payment of the issue fee. Authorization for this Examiner's amendment was given in a telephone interview with Mr. Leonard C. Mitchard on September 19, 2007.
2. The numbering in the listing of claims provided on September 14, 2007 is not in accordance with 37 CFR 1.126, which requires the original numbering of the claims to be preserved throughout the prosecution. When claims are canceled, the remaining claims must not be renumbered. When new claims are presented, they must be numbered consecutively beginning with the number next following the highest numbered claims previously presented (whether entered or not).

Accordingly, misnumbered new claims 58-61 in the present application are currently amended to be renumbered as claims 59-62, respectively, as shown below in accordance with 37 C.F.R. 1.126. See MPEP § 608.01(j).

~~58(new)~~ 59(Amended). A process as claimed in claim 45 wherein the shear rate in the reactor vessel is less than 0.005 ms<sup>-1</sup>.

~~59(new)~~ 60(Amended). A process as claimed in claim 46 wherein the dried solid contains less than 0.05 % by weight of water.

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~~60(new)~~ 61(Amended). A process as claimed in claim 47 wherein the comminuted particles have a mean diameter in the range 200-500 nm.

~~61(new)~~ 62 (Amended). A method as claimed in claim 57 wherein the esterifiable scale inhibitor cross-linked with a polyol is continuously dosed into the injection water in an amount in the range 0.01 to 0.1 weight percent.

### ***Reasons for Allowance***

3. The following is an examiner's statement of reasons for allowance.

The prior art does not teach or suggest the process recited in independent claim 44 for preparing particles of an esterifiable scale inhibitor cross-linked with a polyol via ester-cross-links comprising heating a polyol, an esterifiable inhibitor and a strong catalyst under low shear conditions to form a macrogel; drying said macrogel to form a solid; and comminuting the solid to provide particles of esterifiable scale inhibitor cross-linked with a polyol; wherein said polyol has a mean particle size diameter of less than one micron.

Nor does the prior art teach or suggest the method of inhibiting scale formation as recited in independent claim 52 comprising injecting a suspension of scale inhibitor particles, having a mean diameter of less than one micron, through an injection well in to a subterranean formation; allowing said suspension to percolate in the formation; and controllably releasing the scale inhibitor from the particles in the near well bore region of the production well.

Neither USPN 5,089,150 to Hen nor USPN 6,380,136 B1 (closest prior art) teach or suggest a process for preparing esterifiable crosslinked scale inhibitor particles

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having a particles size of less than 1 micron or using said esterifiable crosslinked particles in a method for inhibiting scale deposits in a subterranean formation.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

#### ***Conclusion***

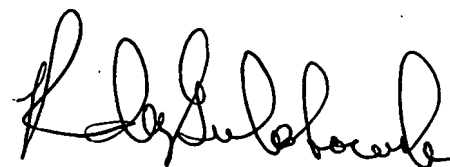
4. Any inquiry concerning this communication or earlier communications from the examiner should be directed to John J. Figueroa whose telephone number is (571) 272-8916. The examiner can normally be reached on Mon-Thurs 8:00-6:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Randy Gulakowski can be reached on (571) 272-1302. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

JJF/RAG



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